Committee on Resources,

Subcommittee on Fisheries Conservation, Wildlife & Oceans

fisheries - - Rep. Wayne Gilchrest, Chairman
U.S. House of Representatives, Washington, D.C. 20515-6232 - - (202) 226-0200

Witness Statement

TESTIMONY OF **KEN HINMAN, PRESIDENT, NATIONAL COALITION FOR MARINE CONSERVATION,** ON **ECOSYSTEM-BASED FISHERY MANAGEMENT UNDER THE MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT,** BEFORE THE **SUBCOMMITTEE ON FISHERIES CONSERVATION, WILDLIFE AND OCEANS, HOUSE RESOURCES COMMITTEE, JUNE 14, 2001**

Mr. Chairman and members of the Subcommittee, I very much appreciate this opportunity to speak with you about a subject to which I have devoted a large portion of my time over the last four years - promoting ecosystem-based fishery management.

My name is Ken Hinman and I am President of the National Coalition for Marine Conservation, the nation's oldest public advocacy organization dedicated exclusively to conserving ocean fish and their environment. Since 1973, my organization, and our efforts to ensure a healthy future for ocean fishing, have co-evolved along with the nation's fishery management system. We would like to think we have played a role in shaping that system for the better.

I am here today because we believe that an ecosystem-based approach to management is a natural progression in the evolution of fishery management. It is a natural outflow of our increasing knowledge of the ocean and our expanding circle of concern for all marine species. It's time, we believe, is now.

Mr. Chairman, I am also here as a co-chair of the Marine Fish Conservation Network, an alliance of over 100 fishing, environmental and scientific organizations working together to reform fisheries management, specifically by strengthening the Magnuson-Stevens Fishery Conservation and Management Act. My remarks reflect the position of our allies in the Network, as laid out in its "Agenda to Protect, Restore and Conserve the Nation's Marine Fish."

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It is widely believed that some fishery declines, or difficulties in restoring overfished species, are caused at least in part by violations of basic ecosystem principles. In 1996, Congress directed the National Marine Fisheries Service to establish an advisory panel to review and recommend application of ecosystem principles to federal marine fisheries management. As a member of that panel, I saw how our goal of developing "fishery ecosystem plans" to guide management decisions would come about only through an incremental strategy. Not in one giant leap, but in carefully measured steps. The first step is to understand and preserve the interdependency of key predator and prey species.

Since publication of the panel's Report to Congress, entitled "Ecosystem-Based Fishery Management," in 1999, I have spent considerable time writing and traveling to meetings and workshops, in an effort to promote its recommendations. In my conversations with policy makers, fishery managers and Congressional

aides, the three most frequently asked questions are:

(1) Do managers want to manage fisheries on an ecosystem-basis?

(2) Can they do it? and

(3) Will they do it? More specifically, how will they do it?

The short answer to the first question, do they want to do it, is yes. Indeed, they have already begun. The state and federal agencies that co-manage the fisheries of Chesapeake Bay are in the initial stages of developing a multispecies, or ecosystem plan for the bay's living resources. The South Atlantic Fishery Management Council, which oversees many valuable commercial and sport fisheries from North Carolina to the Florida Keys, has also started this process.

The fact is, fishery scientists and managers alike recognize the need to address ecological considerations, with emphasis on "need." Actually, the relevant question is not, do fishery managers want to do this; they really don't have a choice. Ecosystem-based management is gaining increased interest and consideration because the effect that fishing for one species has on other, related species is receiving attention in a number of current fishery management debates.

The reality is that ecosystem-based management will occur - already *is* occurring - shaping not only perceptions about management decisions but also the decisions themselves. Decisions are already being made, often based on misperceptions about ecological relationships, because there is no established process for making such decisions. For example:

- The resounding success in rebuilding striped bass along the Atlantic coast has been followed by worries that the newly resurgent bass are finding too little to eat because harvests are too high on one of their most important prey species - menhaden. In Chesapeake Bay, the problem is compounded by fears the low availability of menhaden is causing stripers to increase consumption of blue crabs, already in low supply due to over-harvest.

- Concerns about high, unregulated harvests of horseshoe crabs in the mid-Atlantic area, largely for use as bait in other fisheries, have been heightened by fears that depleted populations of horseshoe crabs would leave shore birds that feast on the crabs' eggs without enough fuel to complete their long migrations. State and federal agencies are moving to limit the number of horseshoe crabs commercial fishermen may land, limits that traditionally are set according to the bait needs of the fishing industry.

- Some New England fishermen and fishery managers have argued that the target population level in the rebuilding plan for dogfish sharks should be lowered, and thus restrictions on fishing for dogfish relaxed, because dogfish consume significant amounts of cod, a higher-value species that is also in need of restoration. Significant predation on cod, however, has not been supported by analyses of dogfish stomach contents. In fact, scientists advising the Regional Fishery Management Councils determined that adult cod are more significant predators of juvenile cod than are dogfish. Nevertheless, the perception of dogfish as an "undesirable" species, whose abundance jeopardizes the abundance of other, more desirable species, not only persists but may influence decisions, even if at a subliminal level.

- Questions have been raised about the ecosystem effects created by the fisheries that remove some of

the ocean's apex predators. In the Atlantic Ocean, swordfish, the large tunas (bluefin, bigeye), blue and white marlin and large coastal sharks are overfished, with several species considered severely depleted. By removing so many of these predators, we are weakening an entire tier at the top of the food chain, which may have dire biological consequences throughout the ecosystem. (Predator removal may be more disruptive than prey removal, since predators are generally longer-lived than their prey, and are thus slower to respond to changes in their environment, or to fill niches left by the disappearance of other predators.)

- An additional concern is the effect of increased harvest of pelagic forage species on their large pelagic predators, many of which are overfished and the object of national as well as international rebuilding programs. Increasing harvests of squid and herring on the northeast Atlantic shelf raise questions about how this unprecedented growth in fishing mortality might impact the effectiveness of recovery efforts for species for whom squid and herring are a dominant food source.

In these and other debates, fishermen and conservationists are demanding action, sometimes conflicting. Unfortunately, sound responses have been hampered by misperceptions about the nature and extent of predator-prey interactions, inadequate or unavailable data about them, and the lack of an established process for taking inter-species relationships into consideration.

We are obliged to make sure that ecological issues are addressed correctly, based on science and agreed upon goals, adhering to a process that we can understand and believe in. So it is not a question of whether we take on this challenge, but how. The species-by-species approach cannot address certain critical issues and problems that will no longer be ignored. The most dangerous course is the one we're on now, forced as we are to deal with these issues, but with no guidance as to what information is needed and, most importantly, how it should be used in the real world of making fishery management decisions.

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The next frequently asked question is, can we manage on an ecosystem basis, at least in an informed and effective manner? Again, the answer is yes. The body of information available to fishery scientists and managers is large and constantly expanding. Most recently, the new bycatch and essential fish habitat provisions of the Magnuson-Stevens Act have prompted the gathering and synthesis of available information on a wide range of species and habitats, from a broad range of sources.

There is an immensity of raw data out there that has not been synthesized or analyzed for ecosystem-based management purposes. There are also new tools for ecosystem modeling, such as ECOPATH, into which this information can now be plugged. In many instances, there is adequate information - if made available to fishery managers - and the modeling tools necessary to predict fundament ecological responses to fishing removals and natural predation, and to make informed decisions that might minimize the adverse impacts of fisheries on trophically-related species.

Ecosystem-based management should strive to include as much information as possible on the structure and function of the ecosystem in which fishing activities occur, including its biological, physical and chemical dynamics, a description of the significant food web, and the habitat needs of different life stages of species that make up the significant food web. This is an ambitious goal, and we will never know or understand everything about how fisheries operate in an ecosystem context. But as the Ecosystem Principles Advisory Panel advised, this is not an acceptable excuse to delay implementing an ecosystem-based approach. Significant relationships are known and understood. We know enough, right now, to ask the right questions,

identify the critical information and information needs, and establish a context for considering what we know and applying it to fishery management decisions.

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As I said earlier, some fishery management bodies are already taking the first steps toward an ecosystem-based approach. That's because they already have the authority and the discretion, without any changes to current law, to consider predator-prey relationships and species interactions in fishery management plans. They are not explicitly required to do so, however, nor are they provided with guidance as to how.

What Congress needs to do, therefore, is provide both drive and direction to this process. By that I mean, amending the Magnuson-Stevens Act to require that the National Marine Fisheries Service and the Regional Fishery Management Councils

> (A) carefully consider the effects of fishing each species on other species in the food web, and
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> (B) begin devising Fishery Ecosystem Plans to serve as overarching guidance and a context for future management decisions.

We believe that Congress should require that all Fishery Management Plans (FMP) be reviewed and revised to consider predator-prey interactions, assess how associated species are affected by fishing allowed under each FMP and establish conservation and management measures that will protect associated species and their respective roles in the ecosystem as well as the integrity and sustainability of the ecosystem overall. This will require determining the effects of fishing on the food web, setting optimum population levels to account for ecological factors, and justifying total allowable catches with respect to interspecies relationships.

As the Ecosystems Principles Advisory Panel recommends, Fisheries Ecosystem Plans, or FEPs, would not be intended as a substitute for Fishery Management Plans, but rather a means to augment their effectiveness. The FEP would be an umbrella document which would include information on the structure and function of the ecosystem each region's managed fishing activities are occurring in, so that fishery managers are aware of the potential impacts of fishing on the various components of the ecosystem, as well as how changes in the ecosystem might affect certain fisheries. The FEP would also establish indices for measuring ecosystem health. Councils would continue to employ FMPs as the primary regulatory vehicle for managing marine fisheries, however, each council FMP should be required to demonstrate that its objectives and conservation and management measures are consistent with the findings and recommendations of the FEP.

We also urge Congress to authorize sufficient new funds to assist the Secretary and the councils in applying ecosystems principles to fisheries research and management under the Act.

Needed Changes to the Magnuson-Stevens Act:

Following are recommended amendments to the Magnuson-Stevens Act supported by the National Coalition for Marine Conservation and the members of the Marine Fish Conservation Network:

- Add consideration of ecosystem principles in fisheries management to the Purposes and Policy section of the Act

- Amend the definitions of optimum yield and overfishing to make more explicit the directive to consider impacts on ecosystems, including predator-prey relationships, in the setting of total allowable catch levels

- Amend the Act to require that all fishery management plans or amendments describe and assess the likely effects on other species in the ecosystem

- Amend the Act to require that each council develop a Fisheries Ecosystem Plan for the major ecosystem(s) under its jurisdiction

- Appropriate necessary funds for the application of ecosystems principles to fisheries research and management

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Finally, it is essential to emphasize that considering fisheries in an ecosystem context does not diminish the need to regulate fishing or downplay the effect of fishing on fish populations. It cannot be used to justify overfishing one species in order to maximize yields of another species. Nor does it diminish the need to fish selectively to avoid bycatch (the incidental capture of non-target species) and minimize bycatch mortality. In fact, ecosystem-based fishery management supports taking the precautionary approach to conserving and managing marine fisheries, especially when the ecosystem effects of fishing are uncertain or unknown. It is our firm belief that an ecosystem-based approach cannot and should not substitute for aggressively implementing existing mandates to prevent overfishing, minimize bycatch and protect essential fish habitat.

Thank you for considering our views, and I look forward to working with the Subcommittee members and staff during the reauthorization to improve management of all marine species.

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